

hierarchy of operations. The above request is therefore interpreted as:

((A AND B) OR C) NOT (D AND E)

To translate this search request into the language of DIALOG, for example, the system may be programmed to insert the parentheses as shown above. Parentheses can be used in virtually any database to alter the normal hierarchy of operations. By including the parentheses explicitly, errors in interpretation of the search request can be avoided.

Alternatively, the system may be programmed to translate the above search request into the following:

A AND B OR C NOT (D AND E)

It is apparent that, given the stated hierarchy in Table 1 for DIALOG, the above search request is interpreted in the same manner as the search request given above.

It is thus another important feature of the invention that the hierarchy of operations may be taken into account in translating the search request into the language of the selected database.

The system described herein can be modified in many ways. For example, the system can aid a person who does not have a personal computer, and who does not have equipment for transmitting digital data over telecommunications lines. Such a person could telephone a human operator of the system, orally specify an area of interest, and the operator could respond to the questions asked by the system, as described above. The operator could be a person without much knowledge of commercial databases, in which case the operator could allow the system to make its own selections, in the manner described above in connection with a user having a data link. Or, the operator could be an expert in the field of databases, in which case the operator could select a particular database in response to a user's oral request, and could even elect to remain on-line with that database. In short, the fully automated procedure described above can be made semi-automatic to accommodate those users without the necessary equipment.

The present invention can be used to advantage by the novice and the expert alike. The advantages to the novice are clear: the system makes all the difficult choices, and does all the "dirty work." The user not only is not required to learn the searching language of the database, but also does not need to memorize passwords, print format commands, and other information which is supplied automatically by the system of the present invention.

For the expert, the system allows the user to gain access to many databases using only one credit card, and without the need to enter a large number of passwords. The expert user can thus retain control over the nature of the search, but can enjoy the benefits of searching with one credit card.

It is apparent that the objects of the invention are fulfilled by the above disclosure. As explained above, however, the invention can be modified in many ways. The number of computers available to service user search requests can be varied. The number of databases to be searched can be changed, as long as a proper translation is made from the language of the system to the language of the database. As shown above, there are many alternative ways of translating the search requests. The particular subdivision of subject areas can be varied, especially to reflect the advent of more (and

more specialized) databases. The degree of automation of the system can be adjusted to fit the needs of different users. These and other modifications are to be deemed within the spirit and scope of the following claims.

What is claimed is:

1. A system for retrieving information from a plurality of remote databases, the databases having at least two different languages, and for supplying said information to a remote user, comprising:

(a) a programmed digital computer, connected by a first modem to an incoming telecommunications line, the computer thereby being capable of receiving instructions from the remote user,

(b) a second modem, connected between the computer and an outgoing telecommunications line, the second modem including automatic telephone dialing means for establishing communication between the computer and any of said plurality of remote databases,

(c) the computer comprising means for automatically selecting one of said databases in response to a specification of a subject of interest by the user, the computer comprising means for accepting a search request from the user, the computer also comprising means for translating the search request received from the user into the language of the database selected by the computer, the computer also comprising means for transmitting the translated search request to the selected database and for downloading, to the memory of the computer, the information obtained from the database after the search is completed, and for transmitting the information to the user.

2. The system of claim 1, further comprising a printer means, connected to be operated by the computer, for printing a bill for the time spent by the user, in response to a command from the computer.

3. The system of claim 2, further comprising auxiliary storage means, connected to the computer.

4. A method of supplying information to a user from one of a plurality of databases, the databases having at least two different languages, comprising the steps of:

(a) receiving a specification, from the user, of the subject in which the user desires to search.

(b) automatically selecting one of said plurality of databases, the selected database being that database which most closely matches the specification of the user, of the databases which are available,

(c) accepting a search request from the user, the search request comprising at least one word for which the user desires to search in the selected database,

(d) translating the search request into the language of the selected database,

(e) gaining access to the selected database and searching the database according to the translated search request,

(f) downloading the information received from the database, and

(g) terminating the connection with the selected database.

5. The method of claim 4, wherein the terminating step is followed by the step of displaying, to the user, the information retrieved during the search.

6. The method of claim 5, wherein the receiving step is preceded by the step of verifying credit card information supplied by the user, and terminating communica-